

**FIG. 1**

FIG. 1 is a block diagram of a system 100. The system 100 includes a processor 110, an I/O interface 140, an I/O device 150, a display 160, and a memory 120. The memory 120 includes ROM 122, RAM 124, GENERAL MEMORY 126, and LUT 128. The system 100 is connected to a bus 130 and a bus 200.

LUT 128		
TRUSTED DTD #1 TRUSTED DTD #2 TRUSTED DTD #3	XML APP #1	XML APP #1 STORAGE LOCATION
	XML APP #2	XML APP #2 STORAGE LOCATION
	XML APP #3	XML APP #3 STORAGE LOCATION

FIG. 2A

LUT 128			
TRUSTED DTD #1	DTD #1 STORAGE LOCATION	XML APP #1	XML APP #1 STORAGE LOCATION
TRUSTED DTD #2	DTD #2 STORAGE LOCATION	XML APP #2	XML APP #2 STORAGE LOCATION
TRUSTED DTD #3	DTD #3 STORAGE LOCATION	XML APP #3	XML APP #3 STORAGE LOCATION

FIG. 2B

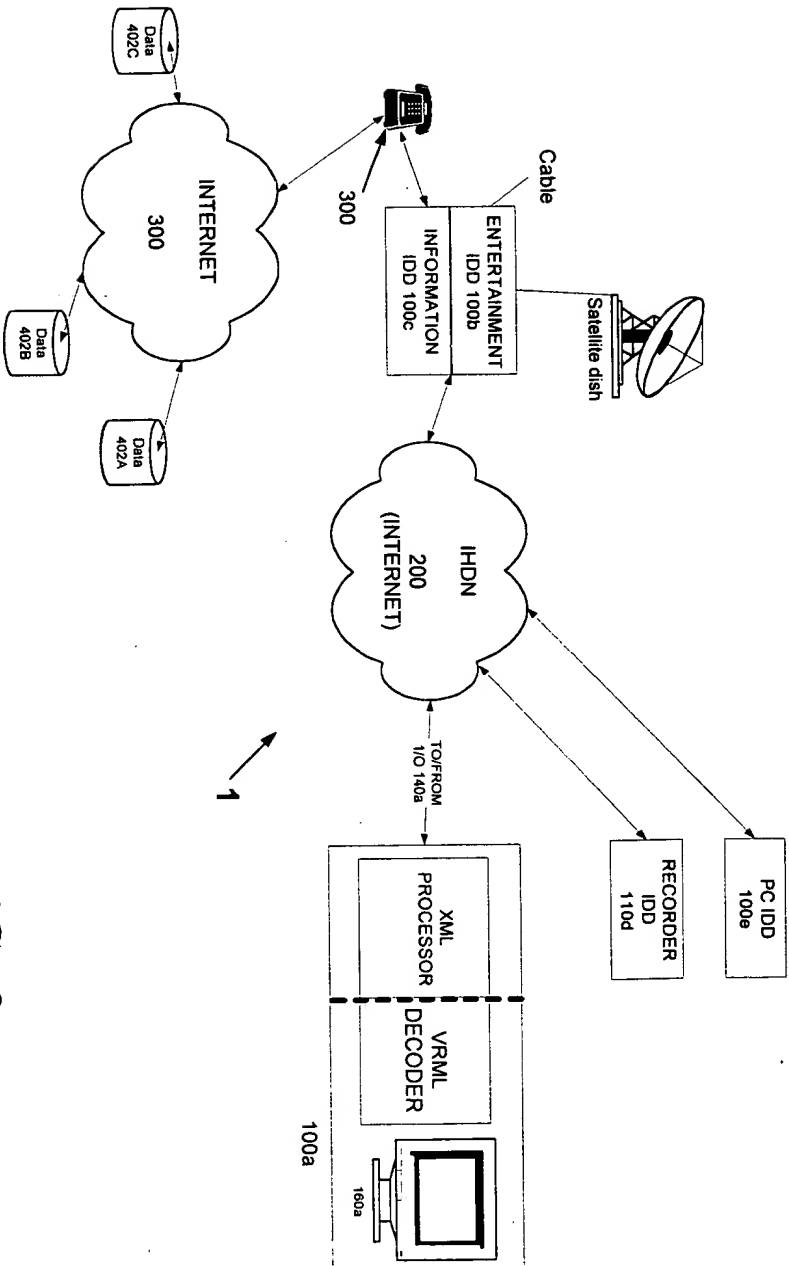


FIG. 3

FIG. 3 is a block diagram of a network architecture.

```

<?xml version="1.0"?>
<!DOCTYPE SYSTEM "VRML.DTD">

<EPG>

  <Date>06-04-1998</Date>
  <TimeBlock Block="6pm-midnight">
    <channel>
      <definition><number>2</number><name>CBS</name>
      <channel-type>Network<channel-type></definition>
    <Entry>
      <Time-slot>
        <start-time>18:00</start-time>
        <end-time>20:00</end-time>
      </Time-slot>
      <Program>
        <movie>
          <title>Miller's Crossing</title>
          <description>A noir gangster movie that examines a conflict
            between the Irish and Italian mafia in a small city in 1920s
            America. This interesting, but very violent tale follows a
            top member of the Irish gang as he switches sides and
            explores a web of deceit and double-crosses between members
            of the two gangs, the corrupt local government and other
            shady characters.</description>
          <program-type>Drama</program-type>
          <program-subtype>Gangster</program-subtype>
          <running-time>2:00</running-time>
          <review-rating>***</review-rating>
          <language>English</language>
          <release-year>1991</release-year>
          <players>
            <director>Joel Coen</director>
            <producer>Ethan Coen</producer>
            <actor>John Turturro</actor></players>
        </movie>
        <parental-rating>TVMA</parental-rating>
      </Program>
    </Entry>
  </channel>
</TimeBlock>

</EPG>

```

FIG. 4

FIG. 4

```

<!-- DTD for a Simple TV Guide Application      R. Krasinski      1998.06.04 -->
<ELEMENT TVGuide - - (Date, TimeBlock+)>
<ELEMENT Date - - (#PCDATA)>
<ELEMENT TimeBlock - - (channel)+>
<!ATTLIST Block CDATA      #REQUIRED >
<ELEMENT channel - - (definition, Entry+)>
<ELEMENT definition - - (number, name, channel-type)>
<ELEMENT Entry - - (time-slot, program)+>
<ELEMENT time-slot - - (start-time, end-time)>
<ELEMENT program - - ((movie | series-episode | sport | talk | news | cartoon), parental-rating))>
<ELEMENT movie - - (title, description, program-type, program-subtype, running-time, review-rating,
language, release-year, MPAA-rating, players)>
<ELEMENT players - - (director, producer, actor+)>
<ELEMENT actor - - (guild-name, award)>
<ELEMENT producer - - (person-name, award)>
<ELEMENT director - - (guild-name, award)>
<ELEMENT parental-rating - - (#PCDATA)>
<ELEMENT number - - (#PCDATA)>
<ELEMENT name - - (#PCDATA)>
<ELEMENT channel-type - - (#PCDATA)>
<ELEMENT start-time - - (#PCDATA)>
<ELEMENT end-time - - (#PCDATA)>
<ELEMENT title - - (#PCDATA)>
<ELEMENT description - - (#PCDATA)>
<ELEMENT program-type - - (#PCDATA)>
<ELEMENT program-subtype - - (#PCDATA)>
<ELEMENT running-time - - (#PCDATA)>
<ELEMENT review-rating - - (#PCDATA)>
<ELEMENT language - - (#PCDATA)>
<ELEMENT release-year - - (#PCDATA)>
<ELEMENT MPAA-rating - - (#PCDATA)>
<ELEMENT guild-name - - (#PCDATA)>
<ELEMENT person-name - - (#PCDATA)>
<ELEMENT award - - (#PCDATA)>

```

FIG. 5





```

<!-- DTD for a Simple TV Guide Application      R. Krasinski      1998.06.04 -->
<ELEMENT TVGuide - - (Date, TimeBlock+)>
<ELEMENT Date - - (#PCDATA)>
<ELEMENT TimeBlock - - (channel)+>
<!ATTLIST Block CDATA      #REQUIRED >
<ELEMENT channel - - (definition, Entry+)>
<ELEMENT definition - - (number, name, channel-type)>
<ELEMENT Entry - - (Time-slot, program)+>
<ELEMENT Time-slot - - (start-time, end-time)>
<ELEMENT program - - ((movie | series-episode | sport | talk | news | cartoon), parental-rating))>
<ELEMENT movie - - (title, description, program-type, program-subtype, running-time, review-rating,
language, release-year, MPAA-rating, players)>
<ELEMENT players - - (director, producer, actor*)>
<ELEMENT actor - - (guild-name, award)>
<ELEMENT producer - - (person-name, award)>
<ELEMENT director - - (guild-name, award)>
<ELEMENT parental-rating - - (#PCDATA)>
<ELEMENT number - - (#PCDATA)>
<ELEMENT name - - (#PCDATA)>
<ELEMENT channel-type - - (#PCDATA)>
<ELEMENT start-time - - (#PCDATA)>
<ELEMENT end-time - - (#PCDATA)>
<ELEMENT title - - (#PCDATA)>
<ELEMENT description - - (#PCDATA)>
<ELEMENT program-type - - (#PCDATA)>
<ELEMENT program-subtype - - (#PCDATA)>
<ELEMENT running-time - - (#PCDATA)>
<ELEMENT review-rating - - (#PCDATA)>
<ELEMENT language - - (#PCDATA)>
<ELEMENT release-year - - (#PCDATA)>
<ELEMENT MPAA-rating - - (#PCDATA)>
<ELEMENT guild-name - - (#PCDATA)>
<ELEMENT person-name - - (#PCDATA)>
<ELEMENT award - - (#PCDATA)>

```

FIG. 8



# FROM CABLE SYSTEM

100b

100a

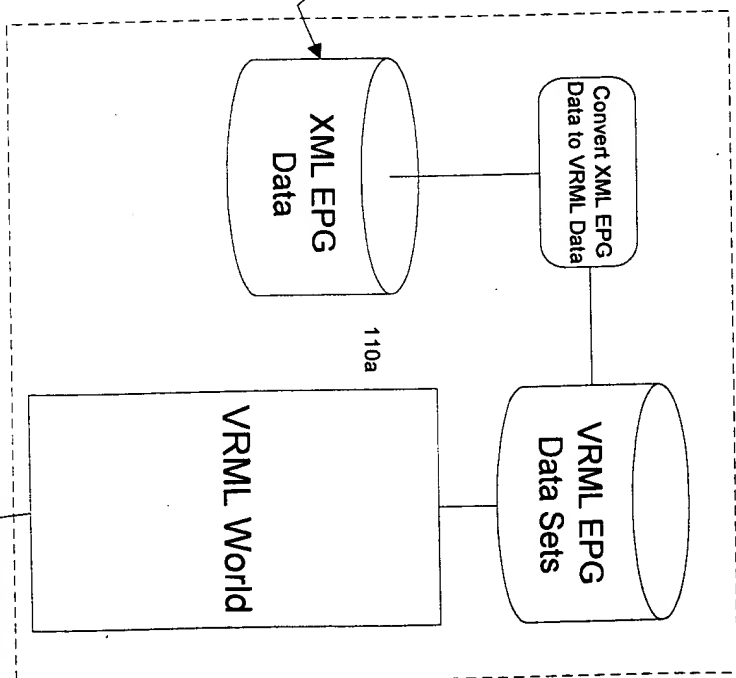
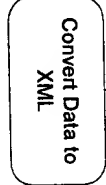
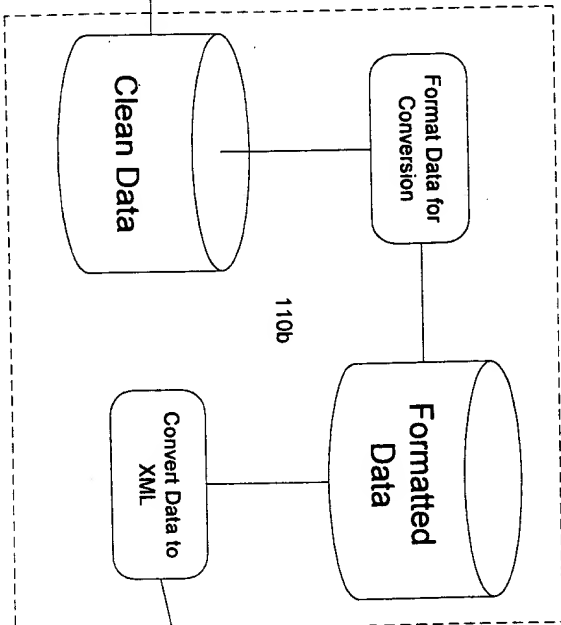
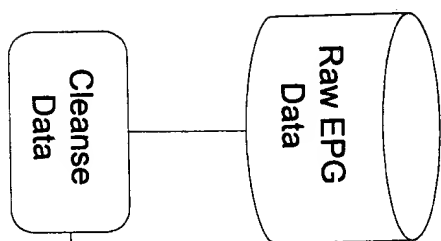


FIG. 9

